Science
Wahr

ERRATA

Title page, September, third title, *read* probable *for* possible; fourth title, *add* of apple.

Page 9, DIPPENAAR abstract, paragraph 2, line 2, *read* .02 per cent for 02 per cent; *read* $HgCl_2$ *for* $HgCL_2$; *read* HCl *for* HCL.

Page 22, last line, *read* was *for* were.

Page 83, paragraph 2, lines 2 and 3, *read* SPRAGUE and HEALD *for* HEALD and SPRAGUE.

Page 90, citation 5, *read* SPRAGUE, R., and F. D. HEALD *for* HEALD, F. D. and R. SPRAGUE. *After* of (*in title*), *add* the.

Page 234, table, column 1, last paragraph, *read* for 19 *for* of 19.

Page 239, line 6 from bottom, *read* systemically *for* systematically.

Page 271, last line, *read* PARSON *for* PARSONS.

Page 362, line 16, *read* direction of the force, applied at the edge *for* direction of the applied force, *i.e.*, the edge. Lines 17 and 19, *read* plane *for* place.

Page 392, last paragraph, line 1, *read* diseases *for* disease.

Page 431, paragraph 2, line 5, *read* 35.6° in two experiments, this temperature is near the maximum *for* infection. In . . . for 35.6° in 11 days at 8°. . . .

Page 472, Summary, paragraph 2, line 4, *after* sugar *add* beet.

Page 602, paragraph 3, line 5, *read* 2.68 μ *for* 2.88 μ.

Page 608, paragraph 2, line 8, *read* did not suffice *for* sufficed.

Page 620, *transpose* line 10 to end of third line from bottom.

Page 785, Summary, paragraph 3, *read* curtisii *for* curtissii.

Page 800, for line 3 *substitute* period the temperature varied considerably and the humidity remained.

Page 824, line 8, *delete* quotation marks *after* uncommon; line 9, *add* quotation marks *after* 1827–1831.

Page 962, Summary, last paragraph, line 3, *read* July and August *for* June and July.

CONTENTS OF VOLUME XXIII

NO. 1. JANUARY

PAGE

Abstracts of papers presented at the twenty-fourth annual meeting of The American Phytopathological Society, Atlantic City, New Jersey, December 28 to 30, 1932, inclusive 1

Studies on certain environmental relations of the root-knot nematode, Heterodera radicicola. G. H. GODFREY and HELENE MORITA HOSHINO 41

Physalospora zeicola on corn and its taxonomic and host relationships. A. H. EDDINS and R. K. VOORHEES 63

Decay of wood and growth of some Hymenomycetes as affected by temperature. RALPH M. LINDGREN 73

Transmissibility of the brooming disease of black locust. L. W. R. JACKSON and CARL HARLEY 83

Knob and elevated vein formations on sweet-potato roots. R. F. POOLE 91

Crown gall on a conifer. J. G. BROWN and M. M. EVANS 97

Phytopathological Notes .....

The bulbous irises as hosts of Tylenchus dipsaci, the bulb or stem nema. G. STEINER and EDNA M. BUHRER 103

Field inoculations of Pinus strobus with sporidia of Cronartium ribicola in Minnesota. RALPH M. LINDGREN and A. DALE CHAPMAN 105

A disease of Colorado fir. ALMA M. WATERMAN and MALCOLM A. MCKENZIE 108

Disease resistance in Allium fistulosum L. E. L. FELIX 109

NO. 2. FEBRUARY

Arthur Jaczewski, 1863–1932. L. R. JONES 111

Pathogenicity and environal studies on Verticillium hadromycosis. W. V. LUDBROOK 117

The preparation and properties of pentathionic acid and its salts; its toxicity to fungi, bacteria, and insects. O. NEAL LIMING 155

The anatomy of the "Kroepoek-diseased" leaf of Nicotiana tabacum and of Zinnia elegans. L. C. P. KERLING 175

Cytological investigations on the spike disease of sandal, Santalum album. M. J. NARASIMHAN 191

Phytopathological Notes .....

Dietrich preferable authority for Cronartium ribicola. PERLEY SPAULDING 203

Comparison of pycnial stage of Cronartium ribicola on Pinus lambertiana and P. monticola. JAS. L. MIELKE 204

A correction. W. W. MACKIE 205

NO. 3. MARCH

The pineapple mealy bug, Pseudococcus brevipes, and wilt of pineapples. WALTER CARTER 207

The spotting of pineapple leaves caused by Pseudococcus brevipes, the pineapple mealy bug. WALTER CARTER 243

Thermal death point of Heterodera radicicola in relation to time. HELENE MORITA HOSHINO and G. H. GODFREY 260

The toxicity of formaldehyde and mercuric chloride solutions on various sizes of sclerotia of Rhizoctonia solani. G. B. SANFORD and J. W. MARRITT 271
Intumescences on leaves of Eucalyptus cornuta, E. coccifera, Hieracium venosum, Mitchella repens, and Thurberia thespesioides. CARL D. LA RUE 281
Resistance of some of the cultivated species of Allium to pink root (Phoma terrestris). D. R. PORTER and H. A. JONES 290
Tuberculina maxima in western North Dakota. J. L. MIELKE 299
Aspergillus sclerotiorum, n. sp., and its relation to decay of apples. G. A. HUBER 306
Phytopathological Notes .....
Bacterium cucurbitae on cucumber. MARY K. BRYAN 309
Cucumber mosaic on tobacco in Wisconsin. JAMES JOHNSON 311
Book Reviews 312

NO. 4. APRIL

The nature of potato rugose mosaic. KARL LEE KOCH 319
Physiologic forms of wheat stem rust in Kansas and Nebraska. GEORGE L. PELTIER 343
The technique of isolation in microbiology. SYDNEY DICKINSON 357
Gibberella moniliformis on corn. R. K. VOORHEES 368
The production of a white fertile saltant of Helminthosporium sativum by means of ultra-violet radiation. F. J. GREANEY and J. E. MACHACEK 379
Occurrence and pathogenicity of Nematospora spp. in Florida. GEORGE F. WEBER 384
Application of the terms "anthracnose" and "scab" to plant diseases caused by Sphaceloma and Gloeosporium. ANNA E. JENKINS 389
Experiments with head smut of corn in western Oregon. E. N. BRESSMAN and H. P. BARSS 396
How plant pathology can contribute to a land-utilization program. NEIL E. STEVENS 404
Phytopathological Notes .....
A hitherto unreported blight of the Juglandaceae. ROBERT T. MORRIS, M.D. 407
A disorder of Persian (English) walnuts grafted on black-walnut stocks, resulting in girdling. C. E. SCHUSTER and P. W. MILLER 408

NO. 5. MAY

Environmental factors in relation to snap-bean diseases occurring in shipment. J. I. LAURITZEN, L. L. HARTER, and W. A. WHITNEY 411
Some viruses affecting spinach, and certain aspects of insect transmission. ISMÉ A. HOGGAN 446
Records of citrus scab mainly from herbarium specimens of the genus Citrus in England and the United States. ANNA E. JENKINS and H. S. FAWCETT 475
Phytopathological Notes .....
Physiologic specialization of Tilletia tritici on emmer. W. E. BRENTZEL 483
Germination of the oospores of Pseudoperonospora humuli. E. N. BRESSMAN and R. A. NICHOLS 485
The spermatia of flax rust, Melampsora lini. RUTH F. ALLEN 487
A cork-borer method for inoculating trees. ERNEST WRIGHT 487
Report of the twenty-fourth annual meeting of The American Phytopathological Society 489

NO. 6. JUNE

Factors affecting the sporulation of Phyllosticta solitaria in artificial culture. A. J. MIX 503

Growth relations in culture of the cotton-root-rot organism, Phymatotrichum omnivorum. ELIZABETH JANE MOORE 525
A Sphaceloma attacking navel orange from Brazil. ANNA E. JENKINS 538
The quince-rust disease caused by Gymnosporangium germinale. H. E. THOMAS 546
Phytopathological Notes .....
A destructive Fusarium wilt of muskmelons. J. G. LEACH 554
Physiological forms of Colletotrichum falcatum Went. E. V. ABBOTT 557
Authority for the name Cronartium ribicola. J. C. ARTHUR 559
Some promising fungicides. M. C. GOLDSWORTHY and E. L. GREEN 561
Mosaic diseases affecting different legumes in relation to beans and peas. W. J. ZAUMEYER and B. L. WADE 562

NO. 7. JULY

Roland Thaxter (1858–1932), his influence on plant pathology. WM. H. WESTON, JR. 565
A cytological study of the teliospores, promycelia, and sporidia in Puccinia malvacearum. RUTH F. ALLEN 572
A new Sclerospora from Nyasaland. WM. H. WESTON, JR. 587
Stem canker of Crotalaria spectabilis caused by **Diaporthe crotalariae**, n. sp. GEORGE F. WEBER 596
The pathology of tobacco black shank. FREDERICK TAYLOR WOLF 605
Field observations of needle rusts of spruce in Minnesota. RALPH M. LINDGREN 613
Consistent mutation of Helminthosporium sativum on a no-nitrogen medium. GLENN E. PAXTON 617
Phytopathological Notes .....
Three new hosts for Tylenchus dipsaci, the bulb or stem nema. G. STEINER and EDNA M. BUHRER 620
Unusual disease symptoms produced by Aphelenchoides fragariae. G. STEINER and EDNA M. BUHRER 622
A potato disease. DONALD REDDICK 622
Book Review 625

NO. 8. AUGUST

Two leaf spots of the peanut (Arachis hypogaea L.). NAOMI C. WOODROOF 627
"Big bud," a virus disease of the tomato. GEOFFREY SAMUEL, J. G. BALD, and C. M. EARDLEY 641
"Suspected mosaic" of the strawberry. E. F. GUBA 654
Further studies of Lima-bean scab. ANNA E. JENKINS 662
New locations for Phytophthora citrophthora and P. hibernalis on Citrus. HOWARD S. FAWCETT 667
Phytopathological Notes .....
An apparent case of transmission of cranberry false blossom through a natural graft. H. F. BERGMAN and W. E. TRURAN 670
Two hosts of the pokkah-bong disease other than sugarcane. C. N. PRIODE 672
Cuban streak. C. N. PRIODE 674
Fusion of large-cell hyphae of the cotton-root-rot fungus. D. C. NEAL, R. E. WESTER, and K. C. GUNN 676

NO. 9. SEPTEMBER

Pathologic changes in the anatomy of leaves of the sugar beet, Beta vulgaris L., affected by the curly-top disease. KATHERINE ESAU 679
Culture of Phytophthora infestans. WILLARD CROSIER 713
Ascospore discharge in Ophiobolus graminis, and its probable relation to the development of whiteheads in wheat. GEOFFREY SAMUEL and S. D. GARRETT 721
Weak Bordeaux spray in the control of fire blight of apple. MONROE MCCOWN 729
Observations and notes on citrus diseases in Minas Geraes, Brazil. ALBERT S. MÜLLER 734
Transmission of the crinkle disease of strawberry. E. K. VAUGHAN 738
Occurrence of watermelon mosaic. M. N. WALKER 741
Phytopathological Notes 745
Humus-extract agar favorable for oospore production in Pythium. R. D. RANDS and ERNEST DOPP 745
A ring-spot-like virus disease of red clover. E. M. JOHNSON 746

NO. 10. OCTOBER

The thermal death rate of tobacco-mosaic virus. W. C. PRICE 749
Leaf scorch of narcissus. DON B. CREAGER 770
Overwintering of Phytomonas pruni on peach. H. H. THORNBERRY and H. W. ANDERSON 787
Control of gladiolus scab. L. E. MILES 802
Powdery mildew of crape myrtle caused by **Erysiphe lagerstroemiae**, n. sp. ERDMAN WEST 814
Records of citrus canker from herbarium specimens of the genus Citrus in England and the United States. H. S. FAWCETT and ANNA E. JENKINS 820
Control of oat smut. V. H. YOUNG and C. K. MCCLELLAND 825
Roguing as a means of control of tobacco mosaic. FREDERICK A. WOLF 831
Effect of mosaic of flue-cured tobacco on yield and quality. FREDERICK A. WOLF and E. G. MOSS 834
Phytopathological Notes 837
Downy mildew of tobacco on pepper, tomato, and eggplant. G. M. ARMSTRONG and W. B. ALBERT 837
Manufactured tobacco, a source of inoculum for mosaic in flue-cured tobacco. HANS J. BUSCH and FREDERICK A. WOLF 839
Correction in authority for Cronartium ribicola. J. C. ARTHUR 841

NO. 11. NOVEMBER

Etiological phytopathology. GEORGE K. K. LINK 843
Certain Sclerotium diseases of grains and grasses. RUTH REMSBERG and C. W. HUNGERFORD 863
Black rot of coffee in Mysore. M. J. NARASIMHAN 875
A mosaic of the fig in California. IRA J. CONDIT and W. T. HORNE 887
Bacterial speck of tomatoes. MARY K. BRYAN 897
Reaction of maize seedlings to Gibberella saubinetii. H. K. HAYES, I. J. JOHNSON, and E. C. STAKMAN 905
Influence of spray applications on air temperatures surrounding sprayed potato plants. H. R. ROSEN 912

Resistance of the current season's shoots of Pinus monticola to infection by Cronartium ribicola. H. G. LACHMUND 917
Phytopathological Note .....
The spermatia of corn rust, Puccinia sorghi. RUTH F. ALLEN 923
Book Review 926
Report of the Seventeenth Annual Meeting of the Pacific Division of The American Phytopathological Society 928

NO. 12. DECEMBER

Horace Mann Woolman, 1853–1932. HARRY B. HUMPHREY 931
Stomatal infection with the virus of typical tobacco mosaic. B. M. DUGGAR and BURT JOHNSON 934
Seedling stem blight of field beans caused by Rhizoctonia bataticola at high temperatures. JAMES B. KENDRICK 949
Isolation of yellow-mosaic viruses from plants infected with tobacco mosaic. JAMES H. JENSEN 964
Some significant estimates of losses from plant diseases in the United States. NEIL E. STEVENS 975
Observations on Tolyposporium filiferum, cause of "long smut" of sorghum. M. N. KAMAT 985
Botrytis cinerea as a cause of potato tuber rot. DONALD FOLSOM 993
Phytopathological Notes .....
Pecans infected with Nematospora coryli Pegl. GEORGE F. WEBER 1000
On the pathogenicity of Wojnowicia graminis. W. C. BROADFOOT 1001
Another powdery mildew on crape myrtle. ERDMAN WEST 1002
Book Reviews 1004